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Claims 1-21 (Cancelled)

22. (Currently Amended) A flaw detection system using acoustic Doppler effect for detecting flaws in a medium wherein there is relative motion between the medium and system comprising:

air-coupled transducer means, spaced from the medium to be inspected, which transmit optical energy for introducing to and ~~sensing~~ receiving from the medium an acoustic signal that propagates in said medium at a predetermined frequency; and

means, responsive to the sensed received propagating acoustic signal, for detecting in the sensed received acoustic signal the Doppler shifted frequency representative of a flaw in the medium.

23. (Currently Amended) The flaw detection system using acoustic Doppler effect of claim 22 in which said transducer means includes a laser for transmitting said optical energy.

24. (Currently Amended) A flaw detection system using acoustic Doppler effect for detecting flaws in a medium wherein there is relative motion between the medium and

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system comprising:

air-coupled transducer means, spaced from the medium to be inspected, for introducing to and sensing from the medium an acoustic signal that propagates in said medium at a predetermined frequency said transducer means including a laser vibrometer interferometer an acoustic receiver for sensing the acoustic signal propagating in the medium and a transmitter that transmits optical energy.

25. (Currently Amended) A flaw detection system using acoustic Doppler effect for detecting flaws in a medium wherein there is relative motion between the medium and system comprising:

air-coupled transducer means, spaced from the medium to be inspected, for inducing an acoustic signal to propagate in the medium at a predetermined frequency and sensing receiving the propagating acoustic signal in the medium; and said transducer means including a transmitter and a receiver and said transmitter including a laser for locally heating the medium to generate acoustic signals; and

means, responsive to the sensed received propagating acoustic signal, for distinguishing the Doppler shifted frequency representative of a flaw in the medium.

26. (Currently Amended) A flaw detection system using acoustic Doppler effect for detecting flaws in a medium wherein there is relative motion between the medium and system comprising:

an air-coupled transducer, spaced from the medium to be inspected, that transmits optical energy for introducing to and sensing receiving from the medium an

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acoustic signal that propagates in said medium at a predetermined frequency; and
a detector, responsive to the sensed received propagating acoustic signal,
that detects in the sensed received acoustic signal the Doppler shifted frequency
representative of a flaw in the medium.

27. The flaw detection system using acoustic Doppler effect of claim 26 in
which said transducer includes a laser that transmits said optical energy.

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28. (Currently Amended) A flaw detection system using acoustic Doppler effect for detecting flaws in a medium wherein there is relative motion between the medium and system, comprising:

an air-coupled transducer, spaced from the medium to be inspected, that introduces to and senses from the medium an acoustic signal that propagates in said medium at a predetermined frequency, said transducer including ~~a laser vibrometer interferometer~~ an acoustic receiver that senses the acoustic signal propagating in the medium and a transmitter that transmits optical energy.

29. (Currently Amended) A flaw detection system using acoustic Doppler effect for detecting flaws in a medium wherein there is relative motion between the medium and system, comprising:

an air-coupled transducer, spaced from the medium to be inspected, that induces an acoustic signal to propagate in the medium at a predetermined frequency and ~~senses~~ receives the propagating acoustic signal in the medium, said transducer including a transmitter and a receiver, said transmitter including a laser that locally heats the medium to generate acoustic signals; and

means, responsive to the ~~sensed~~ received propagating acoustic signal, for distinguishing the Doppler shifted frequency representative of a flaw in the medium.